Ohio River Basin Shipper Response Survey

Start Date: Oct 2005

Projected End Date: Sep 2008

Lead Researcher(s):

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Problem Addressed:

The traditional approach to navigation system modeling is to assume that waterway commodity movements are relatively unresponsive (inelastic) to changes in waterway transportation prices, when this may or may not be the case. The current work allows the estimation of shipper reactions through the development of specific shipper response functions, which can then be incorporated into system modeling.

Objective:

The fundamental work is the development of shipper response functions, by major industrial category, enabling the estimation of shipper reactions to changes in transportation costs. The work entails a broad description of shipping and shipping practices both over time and across key commodities. The description is the result of published information as well as personal interviews with shippers across the commodities. This information is used to develop a broad-based survey of a sample of current and potential users of the Ohio River System that provides the information necessary to estimate the demands for waterway traffic. The particular approach in modeling demand is grounded in choice theory and the use of both revealed and stated preference data. This enables demand functions to be estimated not only of the existing set of shipment attributes (e.g., rates), but also provides demands over a wider range of attributes than is observed in the revealed data. The resulting demand functions are also directly affected by the spatial environment of shippers. Shippers located on the river are far more likely to use barge than alternatives, while shippers located greater distances from the waterway are less likely to use barge. The results can be used to illustrate the behavior of demanders across space and can be aggregated to provide pool level demands by commodity. This latter is important in that the existing planning models define markets at a pool to pool level by commodity

Benefits:

The output of this study effort will provide Corps planners with tools that better identify shipper responses to changes in waterway transportation prices, which can then be incorporated into system modeling and benefit estimation.

Status:

In Progress

Contract Data:

130465, W1020

Progress:

Products (Bookshelf/Toolbox):

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Related Links:

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